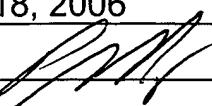


Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional) <b>00015</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>April 18, 2006</u>  Signature 		Application Number <b>10/719,903</b>	Filed <b>November 21, 2003</b>
		First Named Inventor <b>John Santhoff</b>	
		Art Unit <b>2685</b>	Examiner <b>Nguyen T. Vo</b>

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor.

assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

attorney or agent of record. **42,845**  
Registration number \_\_\_\_\_



Signature

**Peter R. Martinez**

Typed or printed name

**760-607-0844**

Telephone number

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

**April 18, 2006**

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

\*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Docket No.: 30287-15

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit:	2685
	)		
John Santhoff et al.	)	Examiner:	Nguyen T. Vo
	)		
Serial No.:	10/719,903	)	
	)		
Filed:	November 21, 2003	)	
	)		
For:	BRIDGED ULTRA-	)	
	WIDEBAND	)	
	COMMUNICATION	)	
	METHOD AND	)	
	APPARATUS	)	
	)		

Carlsbad, California  
April 18, 2006

MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**NOTICE OF APPEAL**  
**&**  
**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

In response to the Final Office Action dated January 30, 2006, a Notice of Appeal, a Pre-Appeal Brief Request for Review, and accompanying statements are submitted for consideration. These documents are submitted within three months of the mailing of the Final Office Action.

## REMARKS

These remarks are submitted for review and consideration during the Pre-Appeal Brief Review. Claims 1-25 are pending and finally rejected, and can be found in Applicant's November 09, 2005 Response. Claims 26-48 have been withdrawn. No other appeals or interferences exist which relate to the present application or appeal. No amendments are outstanding.

### Issue

Whether claims 1-25 are unpatentable under U.S.C. § 103(a) as being obvious in light of U.S. Patent 6,360,075 ("Fischer") in view of U.S. Patent 6,515,622 ("Izadpanah").

### Argument

In order to establish a *prima facie* case of obviousness, three basic criteria must be met:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined), must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure." M.P.E.P. § 2142.

Fischer teaches a radio network wherein content is distributed through a number of repeaters. Each repeater communicates with a number of subscribers by receiving signals from the subscribers and transmitting a signal with the combined subscriber data (Abstract). Fischer addresses the problem of providing an interactive pipeline for video data in limited frequency spectrum (col. 1, lines 45-55). Fischer's solution involves receiving a plurality of signals, demodulating, combining, re-modulating the combined signal, and transmitting it. (col. 2, lines 9-25).

Izadpanah is concerned with a completely different problem, specifically, "ultra-wideband phased array antennas for radio frequency and optical beam forming" (col. 1, lines 6-8). Izadpanah teaches "a method and apparatus for forming ultra wideband phased array antenna beams with no beam squint" (col. 2, lines 25-28).

In the Response to Arguments section, the Examiner rebuts Applicant's position that Fischer and Izadpanah are fundamentally different communication technologies, therefore making it improper to combine them, by stating:

"Applicant's attention is directed to Fischer, column 12 lines 38-42 which suggests that different modulation techniques can be used in his system. In addition, Fischer. . .does not state that communication technology such as transmitting a plurality of electromagnetic pulses cannot be used in his system. Therefore, it is clear that Fischer and Izadpanah is combinable [sic]."

Applicant's only independent claim (claim 1) does not recite a specific modulation technique, and therefore the Examiners discussion of different modulation techniques is irrelevant. Additionally, Fischer's failure to teach ultra-wideband communication technology is also not relevant to the issue of whether there is a correct motivation to combine. There must be a suggestion or motivation **in the reference** to do so. *In re Fritch*, 972 F.2d 1266 (Fed. Cir. 1992) **M.P.E.P. 2143.01**. Applicant submits that the **absence of a teaching** does not constitute a teaching to combine.

### **I. No motivation to combine references**

M.P.E.P. § 2143.01 states: "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teaching of the references are not sufficient to render the claims *prima facia* obvious."

Fischer teaches communication using a 6 MHz bandwidth continuous carrier wave signal parsed into 100 kHz channels (col. 5, lines 10-13).

However, Izadpanah teaches ultra-wideband communication technology that transmits discrete pulses of electromagnetic energy, with each pulse having a 200 picosecond duration resulting in a 5 GHz wide signal (col. 7, lines 35-39). The advantages taught by Izadpanah are explicitly for systems "where the instantaneous fractional bandwidth of the system exceeds 25%" (col. 1, lines 13-14).

Obviously, Fischer's continuous carrier wave signals do not even approach 25% fractional bandwidth, nor would Fischer's system be capable of transmitting or receiving discrete pulses of electromagnetic energy having 200 picosecond durations, as taught in Izadpanah.

In the Final Office Action, the Examiner presents a motivation to combine based on the inherent advantages of ultra-wideband signals. The Examiner states "the ultra wideband pulse system has advantages such as lowered probability of intercept of transmission, reduced multipath fading and radio frequency interference problems, as suggested by Izadpanah at

column 1 lines 11-18. These advantages derive from the pulses used in ultra-wideband (as opposed to the continuous carrier wave used in Fischer). Unfortunately, the benefits of discrete pulsed communication are lost during the unworkable combination with a carrier waveform, as taught in Fischer. Thus, the inherent advantages of ultra-wideband technology cannot provide the necessary motivation to combine, as they are lost in the unachievable combination suggested by the Examiner.

In conclusion, impulse-type UWB communications (as taught in Izadpanah) and conventional carrier wave communications (as taught in Fischer) are completely different technologies that operate in a fundamentally different manner, and thus there is no motivation to combine these references.

## **II. No reasonable expectation of success.**

The second prong of a *prima facie* case of obviousness requires a reasonable expectation of success. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure." M.P.E.P. § 2142.

In this case the Examiner proposes to implement Izadpanah into the communication system of Fischer. The M.P.E.P. and case law requires that the motivation to combine these two references must be supplied by the references themselves. "[T]he best defense against the subtle but powerful attraction of hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references", In re Dembiczak, 175 F.3D 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

Fischer addresses the problem of providing interactive video services to a network by aggregating the signals of a number of clients at repeaters and transmitting the aggregate signal upstream using a modulated narrowband carrier.

Izadpanah addresses the difficulties encountered when using delay lines in ultra wideband beam forming antennas.

In determining scope and content of the prior art on the question of obviousness, the prior patent must be considered in its entirety, i.e., as a whole, including portions that would lead away from the invention in suit. Panduit Corp. vs. Dennison Manufacturing Co. 810 F.2d 1561, 1 U.S.P.Q.2d 1593. Looking at Izadpanah and Fischer each as a whole, how would Fischer's conventional carrier wave radios be combined into Izadpanah's ultra-wideband antennas?

Neither reference teaches or suggests their combination, as Izadpanah is not interested in aggregating signals from a plurality of subscribers at repeaters. And Fischer is not interested in extremely wideband antenna beam forming elements, as taught by Izadpanah.

Yet the Examiner proposes to combine Izadpanah into the communication system of Fischer. But one skilled in the art of narrowband video distribution would not look to a reference teaching beam forming for extremely wideband antennas suitable for ultra-wideband pulses.

Therefore, one skilled in the art would not have a reasonable expectation of success when attempting to combine these references.

### **III. Teach or Suggest All Claim Elements**

Even if Fischer and Izadpanah were combined, albeit improperly, they would still not teach all of the elements as recited in Applicant's independent claim 1. In paragraph 4, the Examiner asserts that Fischer teaches all of the claimed elements "except transmitting a plurality of electromagnetic pulses." Applicant submits that Fischer fails to teach a transmitter is coupled to the demodulator, as recited in claim1:

1. A communication system comprising:

a receiver structured to receive a substantially continuous sine wave carrier signal, the signal modulated to contain communication data;

a demodulator communicating with the receiver, the demodulator structured to demodulate the communication data from the substantially continuous sine wave carrier signal; and

**a transmitter coupled to the demodulator**, the transmitter structured to transmit a plurality of electromagnetic pulses, with the pulses configured to include the communication data. (emphasis added)

Applicant respectfully directs the Examiner to Fischer's Fig. 2, where the demodulators 132a – 132f are connected to QAM64 modulators 134a – 134f, then to IF MIXER 136, and then to BROADBAND XMITTER 138. The Examiner asserts, "Figure 2 in Fischer clearly shows a transmitter (see modulator 134 and transmitter circuit 138) coupled to demodulator 132a. However, Applicant asserts that Fischer's Fig. 2 shows several elements located between the transmitter and demodulator. Thus, any combination of these two references, albeit however improper, would still fail to teach all of the elements recited in independent claim 1.

Respectfully submitted,



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Peter R. Martinez  
Attorney for Applicant(s)